BLM

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

Sundry Notice -- Water Flowline

May 2010

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Worland Field Office

NATIONAL SYSTEM OF PUBLIC LANDS

Environmental Assessment: Sundry Notice -- Water Flowline

Worland Field Office
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Chapter 1. Introduction

1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Sundry Notice -- water flowline, DOI-BLM-WY-R010-2010-0005-EA

1.1.2. Location of Proposed Action:

SWSW Sec. 15 T43N R94W; Centennial Oil Field; Hot Springs Co WY

1.1.3. Name and Location of Preparing Office:

Lead Office - Worland FO and number LLWYR01000

101 S. 23rd St; Worland WY

1.1.4. Identify the subject function code, lease, serial, or case file number:

Case file number WYW90509

1.1.5. Applicant Name:

Centennial Energy

1.2. Purpose and Need for Action:

The purpose of this action is to allow the operator to install 2" of flowline approximately 140' on BLM administered lands. By approving the installation of the flowline, this would allow the operator to implement a waterflood project and recover more oil reserves. The need for the action is established by the BLM's responsibility under FLPMA to respond to this type of request.

1.3. Scoping, Public Involvement and Issues:

The proposed action was reviewed by an interdisciplinary team to assist in defining issues, alternatives, and appropriate mitigation measures. Based on the size and routine natue of the proposed project, external scoping it was determined that external scoping was not necessary.

Chapter 2. Proposed Action and Alternatives

2.1. Description of the Proposed Action:

The operator has requested approval to install a 2" water flowline from the #2-16 water supply well (on State lease W88-00100) to the proposed injection well conversion of the #3-15 well (on WYW90509). The proposed flowline would be poly-pipe and constructed about 500' long in total length, with approximately 140' on BLM administered land. The total width of disturbance would not exceed 30'. Initially the line would be on the surface, the line would either be abandoned or buried by Nov. 2010.

2.2. Description of Alternatives Analyzed in Detail:

Alternative 1 – The action as proposed by the operator.

Alternative 2 – This alternative analyzes the how mitigation applied to the proposed action would be used to reduce effects to other resource values.

Alternative 3 – This alternative analyzes the effect of not permitting the proposed action.

2.3. Alternatives Considered but not Analyzed in Detail

Other alternative routes could be considered. However, the route desired by the operator is the most reasonable route for construction of the flowline; not other route would be environmentally or procedurally preferred.

2.4. Conformance

This plan has been reviewed and been determined that the proposed action is in conformance with the land use plan terms and conditions as required by 43 CFR 1610.5

Name of Plan – Washakie RMP

Date Approved: September 1988

Decision: The Washakie RMP provides that the planning area will be open for oil and gas development. Proposals will be addressed on an individual basis with emphasis on avoiding certain conflict or sensitive areas.

Chapter 3. Affected Environment:

3.1. Paleontological Resources

The surface formation is Morrison/Cloverly Formation which has a PFYC (Potential Fossil Yield Classification) rating of 4 or high. This means the formation has a high sensitivity for paleontological resources. Significant localities are known within this formation.

3.2. Hydrology

The watershed affected by this proposed new flowline is located in the USGS Bighorn River Black Willow Draw watershed HUC # 100800070108. The nearest surface drainage is an unnamed ephemeral channel located 0.1 miles to the northeast of the flowline. There are no riparian or other wetlands that will be affected by this proposed flowline. The prominent flow regime is an ephemeral flow regime with flows in the channel during brief periods of snow melt and following local intense storm events. Upon burial of the new flowline, there will be minor amounts of surface disturbance and increased amounts of bare ground along the 500 foot trenched flowline that will cause minor amounts of increased erosion and bare ground that have an overall impact on the watershed.

There will be no anticipated impacts to groundwater resources.

3.3. Soils

The soils associated with this proposal are mapped as SHINGLE(40%)-THEDALUND(35%) LOAMS. These soils are considered shallow, approximately 10–20 inches to bedrock. These soils have moderately slow to moderate permeability and may occur on all slopes.

3.4. Vegetation

3.4.1. Native Vegetation

The project area is mapped as Wyoming Big Sagebrush plant community. The soil characteristics place this location in a SwLy Range Site. Potential vegetation of this range site include 75% grasses or grass-like plants, 10% forbs, and 15% woody plants.

3.4.2. Invasive Species

No invasive species have been documented at the proposed action location. Noxious weeds documented to exist in the area of the proposed activities include Canada thistle and hoary cress. Cheatgrass occurs across throughout the area in varying abundance, with documented infestations less than 1 mile north of the project area.

3.4.3. Threatened, Endangered, BLM Sensitive Species

There are no Threatened, Endangered, or BLM Sensitive Plant Species in the project area. Therefore no further analysis is warranted.

3.5. Livestock grazing

This project is within the Home Place Allotment (#00518). The allotment is permitted for 150 cattle 10/10–12/2.

3.6. Wildlife

Wildlife habitat within the project area is characterized by deeply incised drainages flowing into an ephemeral tributary of Spring Creek, and then into the Bighorn River approximately one mile to the west. The vegetative community is dominated by a Wyoming big sagebrush, native perennial grass mixture, with cheat grass, prickly pear cactus, and various forbs also present. The surrounding area provides habitat for mule deer, white-tail deer, pronghorn antelope, sage grouse, raptors, and a variety of passerines, small mammals, and predators. No crucial wildlife habitat has been designated with the project area.

3.6.1. Threatened, Endangered, BLM Sensitive Species

No Threatened, Endangered, or BLM Sensitive Species have been observed or recorded within the project area.

3.7. Recreation and Visual Resources

Recreation

The project location is within the extensive recreation management area (ERMA). Recreation management within an ERMA is custodial and addresses use and user conflicts, public health and safety, and resource protection. Recreation resources and associated uses are recognized as legitimate resources and uses, but are not at a high priority level. Recreational activities within and surrounding the project area include hunting, hiking, rock hounding, sightseeing, wildlife viewing, motorized use, and general dispersed recreational use. A spike in recreational use in the area is observed during big game hunting season. As mandated in FLPMA Section 201, BLM-administered public lands within the Worland Field Office were inventoried for wilderness characteristics. BLM-administered public lands within and surrounding the project area do not contain wilderness characteristics. Motorized use within the area is limited to existing roads and trails.

Visual Resource Management

The scenic quality rating units (SQRU) within and surrounding the project area were inventoried as moderately scenic (rating “B” and “C”), high to low sensitivity levels, and foreground/middle ground distance zones. Cultural modifications observed in the area minimized the scenic quality rating and land uses minimized the sensitivity levels. In consideration of the visual resource inventory and the observed and potential conflicting land uses, the area is managed as a VRM Class IV. Class IV objectives are to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

3.8. Cultural and Historical Resources

A Class III Cultural Inventory was conducted for the #3–15 well covering the majority of the proposed flowline. No cultural resources were identified. Located within existing disturbance that has eradicated the potential for cultural properties, no class III cultural inventory is necessary on the remainder of the flowline (approximately 100').

Chapter 4. Environmental Effects:

4.1. Paleontological Resources

4.1.1. Alternative 1 (Proposed Action)

The surface formation is Morrison/Cloverly which has a PFYC (Potential Fossil Yield Classification) rating of 4 or high. This means the formation has a high sensitivity for paleontological resources. Significant localities are known within this formation. Because of existing disturbance and the low potential for the proposed action to affect paleontological localities, no inventory of the project location is necessary.

4.1.2. Alternative 2 (Proposed Action with Mitigation)

No additional consequences would be expected under this alternative. The project authorization is recommended with standard stipulations included in the conditions of approval.

4.1.3. Alternative 3 (No Action)

Under the No Action Alternative, utilization of any potential oil resources would not be permitted at this time.

4.2. Hydrology

4.2.1. Alternative 1 (Proposed Action)

Under this alternative there would be a surface disturbance of 500 feet following the burial of the new proposed flowline associated with the facility. There would be a minor disruption to the natural hydrology along the surface around the disturbance. The amount of the disturbance is at a minor scale and anticipated impacts to the watershed would likely have an negligible effect on the Bighorn River-Black Willow Draw watershed.

4.2.2. Alternative 2 (Proposed Action with Mitigation)

Under this alternative, the 500 feet of flowline would be installed and would be present in the watershed. Mitigation of this alternative would include burial of the flowline only to occur during dry surface conditions where potential impacts to the surface would be minimized from equipment and other machinery. In the event the temporary flowline is broken or leaking, the BLM shall be notified of any watershed impacts as a result of a broken flowline and corrective action shall take place to minimize the watershed impacts from the proposed flowline.

4.2.3. Alternative 3 (No Action)

No effect on water resources would be expected to occur beyond the current situation. There would be no change in surface or groundwater resources as a result of the no action alternative. No pipeline or other surface disturbing activity would occur in the watershed.

4.3. Soils

4.3.1. Alternative 1 (Proposed Action)

Few impacts to the soil resource are anticipated as a result of this action. During the time that the flowline is above ground, minor soil compaction could result from vehicular traffic used to lay out the flowline. This would only be a short term impact. In the event that the line is buried, surface disturbance would be minimal. After trenching the flowline, the roughened surface that would remain and the minimal width of the disturbance would not be prone to runoff and erosion.

4.3.2. Alternative 2 (Proposed Action with Mitigation)

Few impacts to the soil resource are anticipated as a result of this action. During the time that the flowline is above ground, minor soil compaction could result from vehicular traffic used to lay out the flowline. This would only be a short term impact. In the event that the line is buried, surface disturbance would be minimal. After trenching the flowline, the roughened surface that would remain and the minimal width of the disturbance would not be prone to runoff and erosion. Full reclamation would be required under this alternative, mitigating any potential effect to soil resources. Additional mitigation would be required to protect soil resources, including restrictions on construction activities occurring on soils that are too wet. Waterbars or other erosion control structures may be implemented to reduce any occurrence of erosion if necessary.

4.3.3. Alternative 3 (No Action)

Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects and erosion rates would remain at background levels.

4.4. Vegetation, Invasive Species, Threatened, Endangered, and BLM Sensitive Species

4.4.1. Alternative 1 (Proposed Action)

The proposed action would cause no surface disturbance in the short term; however approximately 140’ x 30’ (0.1 acre) of line would be buried on BLM lands if the project were successful. The operator has not proposed any action related to the reclamation of the proposed disturbance, leaving approximately .1 acres of public lands susceptible to invasive species establishment and erosion. Noxious and invasive weeds can occur both directly and indirectly from energy development as well as other development activities that cause disturbance. Weeds and weed seed can be transported and spread with road surfacing and other construction related events including reclamation activities. Weeds and weed seed can be attached to equipment and vehicles thus having the potential to be spread over large areas. Physical disturbance of the soil from pipelines, well locations, road development and other construction, as well as soil moisture and chemical alterations from produced water discharge, and stream flow / storage will also create opportunities for the introduction, infestation and spread of noxious and invasive weeds.

4.4.2. Alternative 2 (Proposed Action with Mitigation)

Although native vegetation would most likely naturally reestablish over time, the implementation of seeding the disturbed ground with native seed would expedite the reclamation process. The operator would also be required to identify and treat invasive species per BLM regulations. Top soil segregation would be required upon burial of the flowline, with reclamation commencing upon completion of burial. This would increase the success of reclamation efforts. Applying mitigations will serve to prevent any noxious weeds and their seeds currently on the site from spreading elsewhere, as well as preventing new infestations from occurring.

4.4.3. Alternative 3 (No Action)

Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on vegetation resources would be expected to occur beyond the current situation. The area will continue to be monitored for the presence of noxious weeds.

4.5. Range

4.5.1. Alternative 1 (Proposed Action)

Vegetation in the proposed area will not be reduced significantly enough to effect the overall livestock forage in the allotment. The proposed project will not have a significant effect on livestock grazing in the allotment.

4.5.2. Alternative 2 (Proposed Action with Mitigation)

Same as 4.5.1

4.5.3. Alternative 3 (No Action)

Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on range conditions or resources would be expected to occur beyond the current situation.

4.6. Wildlife & Threatened, Endangered, and BLM Sensitive Species

4.6.1. Alternative 1 (Proposed Action)

No negative impacts to wildlife resources are anticipated as a result of the proposed project.

4.6.2. Alternative 2 (Proposed Action with Mitigation)

No mitigation for impact to wildlife resources associated with this project is needed.

4.6.3. Alternative 3 (No Action)

Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on wildlife would be expected to occur beyond the current situation.

4.7. Recreation and Visual Resources

4.7.1. Alternative 1 (Proposed Action)

Recreation

The proposed action will further maintain the front country recreation setting character conditions. The additional cultural modifications within the area may conflict with the desired activities, experiences, and beneficial outcomes of the visitors' who wish to recreate in this area. This conflict may be observed during project activities between visitors and project workers, or afterward with the additional unnatural elements within the area. However, existing cultural modifications are observed and mineral extraction activities are prevalent within this area. Visitors wishing to experience the full senses of outdoor recreation and associated experiences and benefits know that those expectations will not be met in this area. If the line is to be buried, the surface disturbance within the corridor may introduce new linear elements to the surrounding area, which may invite motorized users not associated with the project. Additional motorized use on the new surface disturbance may be observed more during hunting season. Because of the front country settings and the amount of industry within the area, the potential for an increase in motorized use over the corridor is very minimal. Impacts to recreation from the proposed project are negligible.

Visual Resource Management

The proposed project will introduce contrasting elements of form, line, color, and texture. These elements may be very subordinate and un-noticable to the casual observer. Installing the flowline above ground will eliminate the contrasting elements of form, line, color, and texture created from a corridor. The flowline may be hidden by the vegetation on the ground, as well as the dark color of the flowline will further minimize contrasting elements. If after November the flowline is to be buried, the contrasting elements will be temporarily observed and evident until vegetation has reestablished. A smooth linear element will be observed, but may not be evident to the casual observer due to the naturalness of the contrasting elements. Impacts from the proposed project will be negligible to VRM.

4.7.2. Alternative 2 (Proposed Action with Mitigation)

Recreation

Recreation resources would benefit from the additional stipulations from other resources, which will enhance the recreational settings and supplemental recreational resources, such as wildlife. However, the area is still within a development area, so recreational uses remain limited. Impacts to travel management will be the same as those in Alternative One. the additional mitigations from other resources may benefit travel management by not encouraging motorized use on the corridor. The impacts to recreation under this alternative will be the same as those in alternative One.

Visual Resource Management

Impacts to visual resource management will be the same as those in Alternative One, except contrasting elements of form, line, color, and texture may be more subordinate due to the additional VRM mitigations and from the additional mitigations from the other resources. So as to minimize the contrasting elements of texture and line, the following mitigation measures will be used:

- Emphasize the shrubby component in the prescribed seed mix.

4.7.3. Alternative 3 (No Action)

Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on recreation or visual resources would be expected to occur beyond the current situation.

4.8. Cultural and Historical Resources

4.8.1. Alternative 1 (Proposed Action)

A Class III Cultural Resource Inventory was conducted or heavy previous surface disturbance has removed the potential for intact cultural properties. No cultural resources were identified. No additional consequences would be expected under this alternative.

4.8.2. Alternative 2 (Proposed Action with Mitigation)

No additional consequences would be expected under this alternative. The project authorization is recommended with standard stipulations included in the conditions of approval.

4.8.3. Alternative 3 (No Action)

Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on cultural resources would be expected to occur beyond the current situation.

4.9. Cumulative Effects

No cumulative impacts were identified during analysis.

Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Wyoming Oil & Gas Conservation Commission	WOGCC has approval authority for injection wells.	

Chapter 6. List of Preparers

The following Worland Field Office personnel reviewed or have been contacted with regard to this EA.

Table 6.1. List of Prepares

Name	Title	Responsible for the Following Section(s) of this Document
Mike Peck	Range Management Specialist	Range
Marit Bovee	Archaeologist	Cultural Resources/ Paleontological Resources
Ted Igleheart	Wildlife Biologist	Wildlife/T&E Wildlife
Paul Rau	Recreation Specialist	Recreation/VRM/ Wilderness/ACECs
Karen Hepp	Range Management Specialist	T&E Plants
Steve Kiracofe	Soil Scientist	Soils
Jared Dalebout	Hydrologist	Hydrology
CJ Grimes	NRS	Invasive Species